

**Seattle Public Utilities (SPU)**  
**Madison Valley Long-Term Stormwater Project**  
**SEPA ADDENDUM**  
**May 26, 2009**

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**Project Background**

SPU completed a SEPA checklist for the Madison Valley Long-Term Stormwater Project and issued a Determination of Nonsignificance (DNS) on March 25, 2008. The SEPA checklist evaluated the potential environment impacts of Phase 1 (expanding the existing above-ground stormwater storage at 30<sup>th</sup> Avenue East and East John Street) and Phase 2 (constructing the remainder of the long-term stormwater project) and considered two alternatives for Phase 2. Alternative 2A involved constructing additional above-ground stormwater storage on the block to the north of the existing storage and Alternative 2B entailed diverting stormwater flows to a new stormwater storage facility at Washington Park. On June 2, 2008, the Seattle City Council approved proceeding with Phase 1 and Phase 2B improvements (Council Ordinance 122699).

**Proposed Pipeline Alignments**

After the approval of Council Ordinance 122699, SPU evaluated alternative pipeline alignments for Phase 2B for the installation of the stormwater conveyance pipe with consideration of public comments to minimize construction impacts along East Madison Street. The pipeline route, referred to in Figure 1 as Baseline Alignment 2B, begins at 27<sup>th</sup> Avenue East and East John Street, heads north along 27<sup>th</sup> Avenue East to East Arthur Place, then turns northeast along East Arthur Place to 29<sup>th</sup> Avenue East, then turns northwest along 29<sup>th</sup> Avenue East to East Madison Street, then turns northeast along East Madison Street, and last turns north into a new stormwater storage facility at Washington Park. The total distance for Baseline Alignment 2B is approximately 2,300 feet.

SPU is now refining the design for Phase 2B and is considering a modification to a portion of the conveyance pipeline alignment. Two alternative routes are being considered, referred to in Figure 1 as Alternative 2B-1 and 2B-2. Alternative 2B-1 begins at 27<sup>th</sup> Avenue East and East John Street, heads north along 27<sup>th</sup> Avenue East to East Arthur Place, then turns northeast along East Arthur Place to Martin Luther King Jr. Way East, then turns north along Martin Luther King Jr. East and, where Martin Luther King Jr. Way East turns into 28<sup>th</sup> Avenue East, continues north on 28<sup>th</sup> Avenue East to East Roy Street, and last turns east along East Roy Street continuing east to a new stormwater storage facility at Washington Park. The total distance for Alternative 2B-1 is approximately 2,425 feet.

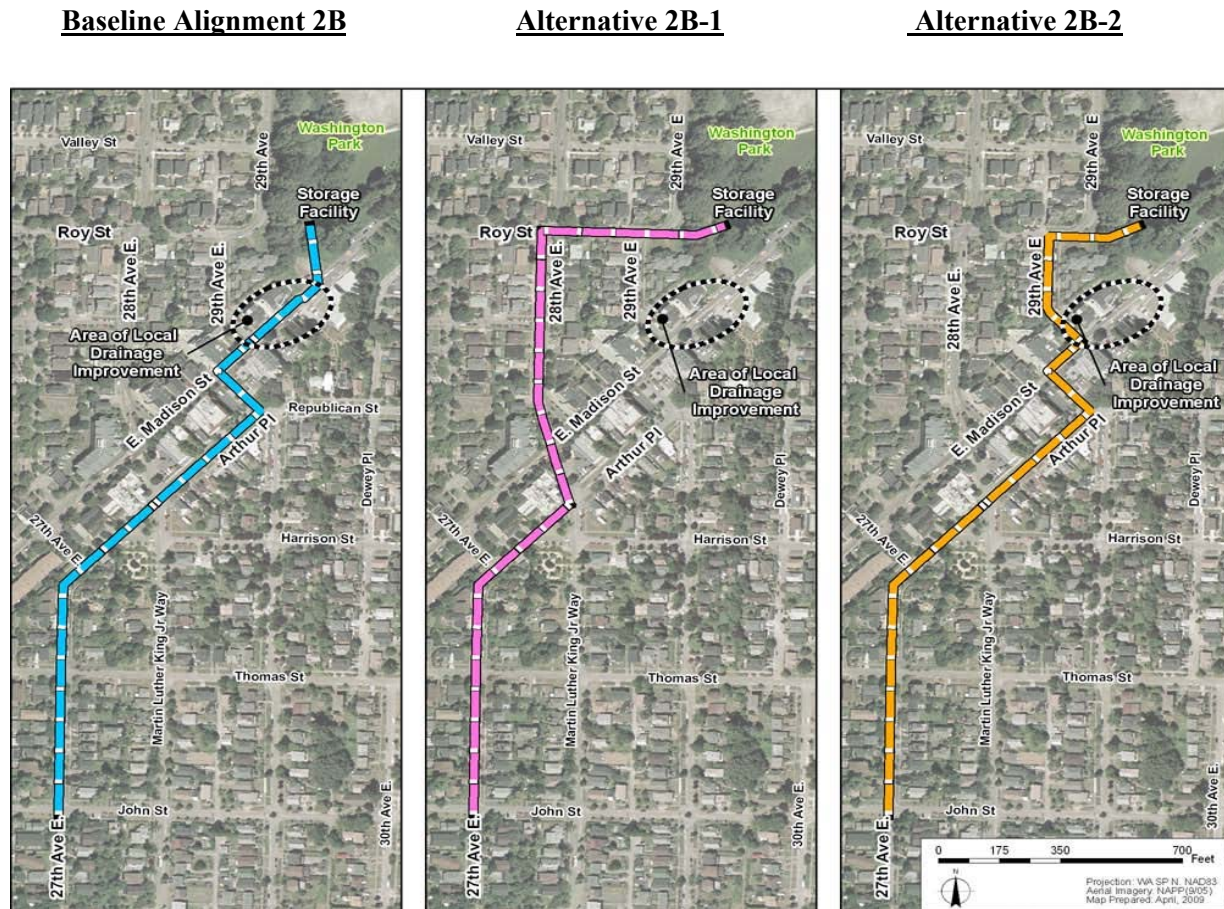
Alternative 2B-2 also begins at 27<sup>th</sup> Avenue East and East John Street, heads north along 27<sup>th</sup> Avenue East to East Arthur Place, then turns northeast along East Arthur Place to 29<sup>th</sup> Avenue East, then turns north along 29<sup>th</sup> Avenue East to East Madison Street, then turns northwest along 29<sup>th</sup> Avenue East to East Madison Street, then turns northeast along East Madison Street to 29<sup>th</sup> Avenue East, then turns northwest and north along 29<sup>th</sup> Avenue East to East Roy Street, and last turns east on East Roy Street continuing east to a new stormwater storage facility at Washington Park. The total distance for Alternative 2B-2 is approximately 2,225 feet.

Additionally, SPU is considering an alternative method of trenchless technology to minimize construction impacts along the pipeline alignment for Alternative 2B-1. The total volume of vehicular trips would be reduced to approximately 1,250 trips for trenchless methods compared to approximately 3,400 trips for open cut construction methods proposed for Alternative 2B-2. Approximately 3,500 trips were estimated initially for the Phase 2B baseline alignment.

Greenhouse Gas(GHG) Emissions totals also would be reduced to approximately 996 MTCO<sub>2</sub>e for trenchless methods (Alternative 2B-1) compared to approximately 1,896 MTCO<sub>2</sub>e for open cut methods (Alternative 2B-2)

due to substantial reduction in the number of construction trips and in the amount of pavement replaced. Table 1 summarizes the differences between the three proposed pipeline alignment routes.

**Figure 1. Proposed Pipeline Alignments**



**Table 1. Summary of Proposed Pipeline Alignments**

	<b>Baseline Alignment 2B</b>	<b>Alternative 2B-1</b>	<b>Alternative 2B-2</b>
<b>Streets</b>	27 <sup>th</sup> Ave. E., E. Arthur Pl., 29 <sup>th</sup> Ave. E., E. Madison St.	27 <sup>th</sup> Ave. E., E. Arthur Pl., M. L. King Jr. Way E., 28 <sup>th</sup> Ave. E., E. Roy St.	27 <sup>th</sup> Ave. E., E. Arthur Pl., 29 <sup>th</sup> Ave. E., E. Madison St., E. Roy St.
<b>Estimated Total Distance</b>	2,300 feet	2,425 feet	2,225 feet
<b>Estimated Total Vehicular Trips</b>	3,500*	1,250**	3,400*
<b>Estimated GHG Total Emissions</b>	1,945 MTCO <sub>2e</sub> *	996 MTCO <sub>2e</sub> **	1,896 MTCO <sub>2e</sub> *
* open cut construction methods		** trenchless construction methods	

#### **SEPA Checklist**

Specific sections of the SEPA checklist have been revised to reflect the locations of the alternative alignments for the Phase 2B conveyance pipeline. Specifically, the following sections of the SEPA checklist have been revised:

- A4. Date checklist prepared**
- A6. Proposed timing or schedule**
- A8. Environmental information prepared**
- A11. Proposed project**
- A12. Location of the proposal**
- B1. Earth**
- B2. Air**
- B3. Water**
- B4. Plants**
- B8. Land and Shoreline Use**
- B12. Recreation**
- B13. Historic and Cultural Preservation**
- B14. Transportation**

#### **CONCLUSION**

No new significant adverse impacts are anticipated. SPU will circulate the addendum, including the revised checklist to agencies with jurisdiction and other agencies and parties of record.

The applicable revised sections of the SEPA checklist follow.

**SEPA Addendum**  
**Environmental Checklist – Revised Sections**  
(revised text highlighted)

**A. BACKGROUND**

**A1. Name of proposed project, if applicable:**  
Madison Valley Long-Term Stormwater Project

**A2. Name of applicant:**  
Seattle Public Utilities

**A3. Address and phone number of applicant and contact person:**  
Grace Manzano, Assistant Project Manager  
Seattle Public Utilities  
Seattle Municipal Tower, Suite 4900  
PO Box 34018  
Seattle, WA 98124-4018

**A4. Date checklist prepared:**  
March 21, 2008  
May 21, 2009 (Addendum)

**A5. Agency requesting checklist:**  
Seattle Public Utilities

**A6. Proposed timing or schedule (including phasing, if applicable):**  
Seattle Public Utilities (SPU) proposes to complete the long-term stormwater project in two Phases.

Phase 1

Phase 1 of the long-term stormwater project consists of construction on the 100 Block Above-Ground Stormwater Storage Expansion. Construction is planned for 2009.

Phase 2

Phase 2 consists of the remainder of the long-term stormwater project and SPU is considering one of the two alternatives below:

*Alternative A*

200 Block Above-Ground Stormwater Storage. Construction is planned for some time between 2009-2011.

*Alternative B*

NW Diversion and Washington Park Stormwater Storage. Construction is planned for some time between 2009-2011. Since the original SEPA checklist was prepared in March 2008, SPU has decided to evaluate two alternative alignments (Alternative 2B-1 and Alternative 2B-2) for the northern portion of the NW Diversion Route baseline alignment (referred to as Alternative B or Alternative 2B). A SEPA Addendum has been prepared, which includes a summary and this revised checklist, to evaluate impacts specific to the potential route modifications.

Minor Improvements

Minor flood control improvements would be completed in the same time period as Phase 2.

Construction is planned for some time between 2009-2011.

**A7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal?**

No future additions or expansions or further activity related to the described phases and alternatives of the project are expected to occur except for maintenance activities.

**A8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

In early 2006, SPU prepared a SEPA checklist and issued a Determination of Non-Significance (DNS) for the existing above-ground stormwater storage facility in the 100 block of 30<sup>th</sup> Avenue East and East John Street. In January 2008, SPU completed environmental review for the removal of two houses and accessory structures on the adjoining lots in the 100 block.

SPU has prepared numerous studies, reports and analyses related to addressing Madison Valley stormwater. These reports include analysis of rainfall events that led to flooding incidents; analysis and modeling of the sewer and stormwater collection systems serving Madison Valley; and an analysis of alternatives. In particular, SPU developed a detailed computer model of the combined sewer system in the Madison Valley basin that allows for better understanding of what is needed to prevent flooding caused by major storms in the area around 30th Avenue East and East John Street. SPU also built a physical scale model of the combined sewer line in 30th Ave. E. to provide needed data for analyzing flows in the system during large storms

SPU also completed limited subsurface geologic investigations at the location of the 100 Block stormwater storage facility along 30th Avenue East, and in the proposed Washington Park storage area.

The document titled *Draft Madison Valley Long-Term Solution Project Development Plan* (Dec. 12, 2007) summarized the evaluation of the numerous long-term stormwater solutions alternatives initially considered by SPU and was a key in the selection of the preferred long-term stormwater projects.

A Cultural Resources Assessment (Draft Cultural Resources Technical Memo: April 28, 2009) was prepared for the project by AMEC Earth & Environmental.

**A9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

There are no other applications known to be pending in the area directly affecting the property covered by this proposal.

**A10. List any government approvals or permits that will be needed for your proposal, if known.**

#### Phase 1

City of Seattle Grading, Master Use Permit  
City of Seattle Street Use Permit

#### Phase 2

##### *Alternative A*

City of Seattle Deconstruction and/or Demolition permits  
City of Seattle Building and other permits for removal of underground storage tanks  
City of Seattle Grading, Master Use Permit  
City of Seattle Street Use Permit  
City of Seattle Ordinance approval selecting preferred alternative  
Puget Sound Clean Air Agency Notice of Demolition  
State Department of Ecology NPDES Construction Permit

##### *Alternative B*

City of Seattle Grading, Master Use Permit  
City of Seattle Street Use Permit  
City of Seattle Critical Areas Approval or Exemption (Environmentally Critical Areas on the project site or in the vicinity include Liquefaction, 40% steep slopes, Landfill, and Wildlife zones).  
City of Seattle Ordinance approval selecting preferred alternative

#### Minor Improvements

City of Seattle Grading, Master Use Permit  
City of Seattle Street Use Permit

### **A11. Give brief, complete description of your proposal, including the proposed uses and the site of the project.**

#### **Project Background**

Madison Valley is located on the valley floor of a 706-acre basin. The natural drainage course for this basin was blocked by land filling under East Madison Street and Washington Park in the early 1900s, and the neighborhood was built over a historic streambed. In the early 1970s, stormwater from 480 acres in Madison Valley was separated from the combined system in the early phases of a drainage separation project. Subsequent phases of the drainage project were not completed because of cost and environmental impact considerations at the time, thus the pipe, which would have conveyed stormwater out of the basin, was not constructed.

Soon after a flood in 2004, SPU staff began working with the community to develop potential solutions to the flooding in Madison Valley, especially the flooding that occurred near 30th Avenue East and East John Street. Between the end of 2004 and the end of 2005, SPU carried out a comprehensive project development phase, which included analyzing 13 improvement alternatives, in parallel with rainfall monitoring and flow modeling work to better understand rainfall patterns and stormwater routes in the valley. One result of these analyses was the decision to construct an interim solution, while the long-term solution analysis and alternatives development was being carried out in parallel. Through this effort SPU gained a greater understanding of the volume and flow rates that caused flooding in 2004. In 2005, the City purchased 5 properties, with 4 existing homes, in the block south of 30th Avenue East and East John Street. The houses were moved or demolished to use the site to build the interim solution, the construction of a 1-million gallon capacity stormwater detention

basin at 30th Avenue East and East John Street, plus a vault with flow control structures in street right-of-way at East Thomas Street. In 2006, SPU performed design and started construction of the Madison Valley Interim Solution Project, which was expected to be complete by the end of December 2006. The December 14, 2006 storm hit two weeks before the detention basin was completed. While the detention pond functioned as planned and retained 1 million gallons of stormwater during the December 14th storm, work on some of the underground pipe connections had not yet been completed. The interim solution is now complete.

It was anticipated that the interim improvements would alleviate flooding for some storm events, but would not prevent flooding for all the storms that could occur. Therefore, SPU has been aggressively pursuing a long-term solution to the flooding problem to provide a greater degree of protection to the community and has been focusing on projects that would provide the area with a drainage system with the capacity to handle stormwater during major storm events. SPU evaluated various long-term approaches to address the chronic flooding in Madison Valley and, ultimately, focused its analysis on the long-term alternatives described below.

### **Proposed Project**

The proposed project is divided into two phases and also includes minor improvements. The phased project is described in more detail below.

#### Phase 1 –Expansion of the Existing Above-Ground Storage Facility

Phase 1 would expand the existing above-ground storage facility at 30th Avenue East and East John Street. The existing facility would expand its current storage capacity of 1.0 million gallons (MG) to a storage capacity of 1.8 million gallons by extending the facility two lots to the south to include the entire west half of the 100 Block. The site would require excavation to a depth of approximately 12 feet and pipes and drain lines would be installed as needed to provide for the facility expansion. The completed above-ground stormwater storage facility would be re-vegetated with grasses to serve as a simple, passive park/open space area, except during large storm events.

#### Phase 2 – Alternative A or Alternative B

Phase 2 is one of two proposed alternatives described in more detail below:

##### *Alternative A: 200 Block Above-Ground Stormwater Storage*

Under this alternative, SPU would construct an above-ground storage facility (grassy area) with a capacity of approximately 2 million gallons. The facility would occupy the entire 200 block between 30th Avenue East and 31st Avenue East and between East John Street and East Thomas Street. This stormwater storage would be in addition to the Phase 1 expanded above-ground storage facility in the 100 Block of 30th Avenue East.

This facility would require the acquisition and subsequent deconstruction/demolition, or relocation of 17 residences that currently exist in the 200 block. The proposed storage would connect to the existing combined sewer system, requiring minimal new drain piping to connect to the system. The topography of the site is bowl-shaped and would require limited grading and/or excavation. The area would be landscaped so it could be used as a park/open space when the area is not providing temporary stormwater storage for large storm events.

This alternative removes residences with the highest risk of flooding, creates greater storage capacity for larger storms, and would be the easier of the two Phase 2 alternatives to build.

However, it also would require 17 homeowners to sell their homes and relocate.

#### *Alternative B: NW Diversion and Washington Park Stormwater Storage*

Alternative B would divert flows from Madison Valley to stormwater storage in Washington Park. SPU would divert some of the stormwater flow from higher areas in the basin (before it reaches the 100 Block above-ground storage facility) through 48-inch and 60-inch diameter pipes to a proposed stormwater storage facility at Washington Park. The new pipe is expected to be installed along 27th Avenue East, East Arthur Place, 29<sup>th</sup> Avenue East, and East Madison Street. Two alternative pipeline routes, 2B-1 and 2B-2, were added following completion of the initial SEPA review that included the baseline alignment, Alternative B. Alternative 2B-1 adds 28<sup>th</sup> Avenue East, East Roy Street, and Martin Luther King Jr. Way East to the pipeline route and Alternative 2B-2 adds 29<sup>th</sup> Avenue East (north of East Madison Street) and East Roy Street to the pipeline route.

Alternative 2B, NW Diversion and Washington Park Stormwater Storage, includes a flow control vault with 0.8 million gallons underground storage and a 1.2 million gallons above-ground stormwater storage facility (grassy area) at Washington Park. The final alternative proposal may result in some variation of the two storage facilities, all storage below ground, or all storage above-ground. The most recent concept includes both above- and below-ground storage in Washington Park. The NW Diversion would divert flows away from Madison Valley and alleviate flooding in the valley with little or no property acquisition. As proposed, above-ground stormwater storage in Washington Park would only be utilized for up to several hours during very large storms (50- to 100-year and larger storms).

This alternative would have only minimal impact on winter recreation opportunities in the community. Compared to Alternative A, construction activities would impact a much greater area, for a longer duration, due to open street cuts to install the new pipelines expected along 27th Avenue East, East Arthur Place, 29<sup>th</sup> Avenue East, and East Madison Street. The alternative pipeline routes also include impacts along Martin Luther King Jr. Way East, 28<sup>th</sup> Avenue East, and East Roy Street for Alternative 2B-1 and 29<sup>th</sup> Avenue East (north of East Madison Street) and East Roy Street for Alternative 2B-2. Although the original concept was to use open cut methods to install the Alternative 2B pipeline, SPU is considering the use of trenchless construction methods. In order to compare these two methods, trenchless construction methods are analyzed for Alternative 2B-1 and open cut construction methods are assumed for Alternative 2B-2. See Figure 1 of the SEPA Addendum summary which this revised checklist supports.

All of the proposed above- and below-grade storage facilities are intended to store stormwater from surface runoff and the separated stormwater pipe systems within the Madison Valley basin. The storage facilities all are designed for large stormwater runoff events. The above-grade facilities (grassy areas) in the 100 and 200 blocks would be filled for short periods during very large storms that may occur approximately every 3 to 4 years. Water is expected to remain in the storage facilities for several hours until the rain subsides and the stored water can be released to the existing combined sewer system, which currently carries all drainage water from the area to the West Point Treatment Plant.

#### Minor Improvements

Additional minor improvements are also described in this project proposal. During the December 14<sup>th</sup>, 2006 storm, significant flooding occurred in close proximity to 30<sup>th</sup> Avenue East and East John Street including at 29<sup>th</sup> Avenue East and East Denny Way and also along 31<sup>st</sup> Avenue East between East Thomas Street to East Republican Street. The 29<sup>th</sup> Avenue East sewer backups and surface flooding were a result of lack of capacity in SPU's sewer mainline



downstream during this extreme storm as well as a large volume of surface water along East Denny Way. The flooding along 31<sup>st</sup> Avenue East is due to the lack of pipe conveyance capacity along 31<sup>st</sup> Avenue East for stormwater that collects along the street during very large storms. This existing pipe network is not designed to convey stormwater that results from strong storm events such as the December 14<sup>th</sup>, 2006 storm.

In addition to these two locations, the project team also identified that inlet capacity could be improved along Martin Luther King, Jr. Way to alleviate street flooding during these very large storm events. During strong storm events, surface water can bypasses inlets and head downhill towards 30<sup>th</sup> Avenue East, thus contributing to surface flooding. SPU identified key locations along Martin Luther King, Jr. Way where additional catch basins could be installed to address this problem.

Specific minor improvements include:

- A new 18-inch diameter combined sewer overflow pipe located on East Harrison Street between 30<sup>th</sup> and 31<sup>st</sup> Avenue East.
- A new 12-inch diameter combined sewer overflow pipe located on East Thomas Street between 30<sup>th</sup> and 31<sup>st</sup> Avenue East. The new pipelines will provide additional drainage capacity to alleviate surface flooding and sewer backups along 31<sup>st</sup> Avenue East between East Thomas Street and E, Harrison Street.
- Raised landscaping beds and sewer lateral improvements located at the NE corner of 29<sup>th</sup> Avenue East and E. Denny Way. The raised landscaping beds and sewer later improvements are to greatly reduce sewer backups and surface water flooding at residences near the NE corner of 29<sup>th</sup> Avenue East and East Denny Way during very large storms.
- Stormwater catch basins located along Martin Luther King Jr. Way at East Denny Way, East Olive Street, East Pike Street, and East Spring Street. Additional catch basins along Martin Luther King Jr. Way at East Denny Way, East Olive Street, East Pike Street, and East Spring Street are necessary to collect storm water flowing on the street and direct it to the existing stormwater pipe in Martin Luther King Jr. Way.

All construction work required for the minor improvements would occur within existing streets and road right-of-ways.

**A12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

Phase 1

Phase 1 is located on the west half of the 100 Block of 30th Avenue East, between East Denny Way and East John Street. It includes both the reworking of the existing above-ground stormwater storage facility and expanding that facility by two properties to the south. The site is located within Township 25 North, Range 04 East, Section 28.

Phase2

Alternative A

Alternative A would occupy the entire 200 Block between 30th Avenue East and 31st Avenue

East and between East Thomas Street and East John Street. The site is located within Township 25 North, Range 04 East, Section 28.

*Alternative B*

Alternative B is expected to install stormwater conveyance pipes along the roadways of 27th Avenue East, East Arthur Place, 29th Avenue East, and East Madison Street. The alternative pipeline routes also include Martin Luther King Jr. Way East, 28<sup>th</sup> Avenue East, and East Roy Street for Alternative 2B-1 and 29<sup>th</sup> Avenue East (north of East Madison Street) and East Roy Street for Alternative 2B-2. All pipeline routes end at a proposed stormwater storage facility located within the south end of Washington Park next to East Madison Street. The site is located within Township 25 North, Range 04 East, Section 28.

Minor Improvements

- A new 18-inch diameter combined sewer overflow pipe located on East Harrison Street between 30<sup>th</sup> and 31<sup>st</sup> Avenue East.
- A new 12-inch diameter combined sewer overflow pipe located on East Thomas Street between 30<sup>th</sup> and 31<sup>st</sup> Avenue East.
- Raised landscaping beds and sewer lateral improvements located at the NE corner of 29<sup>th</sup> Avenue East and E. Denny Way.
- Stormwater catch basins located along Martin Luther King Jr. Way at East Denny Way, East Olive Street, East Pike Street, and East Spring Street.

**B. ENVIRONMENTAL ELEMENTS**

**B1. Earth**

**a. General description of the site:**

☐ Flat   ☐ Rolling   ☐ Hilly   ☐ Steep Slopes   ☐ Mountains  
☒ **Other:** see below

Phase 1

Flat

Phase 2

*Alternative A*

Flat, bowl-shaped.

*Alternative B*

Mostly flat with limited areas of rolling terrain (less than 10% slope) and a small area of steep slopes.

Minor Improvements

Mostly flat in or near existing streets (less than 10% slope).

**b. What is the steepest slope on the site (approximate percent slope)?**

Phase 1

Steepest slopes are approximately 4.3%.

Phase 2

*Alternative A*

Steepest slopes are approximately 7.5%.

*Alternative B*

Steepest slopes are approximately 42% near East Madison Street and 29th Avenue East on the edge of Washington Park.

Minor Improvements

The area is flat in or near existing streets (less than 10% slope).

- c. What general types of soils are found on the site (for example, clay sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.**

Soil data was not available from the US. Dept. of Agriculture National Resource Conservation Service (NRCS) Web Soil Survey online. SPU completed limited subsurface geologic investigations at the location of the 100 Block Storage Area along 30th Avenue East, and in the proposed Washington Park storage area.

Phase 1

The native soil is peat/silt, overlain by fill from residential construction.

Phase 2

*Alternative A*

The native soils are peat/silt on the south side and sand/silt on the north side. Native soils are overlain by fill from residential construction.

*Alternative B*

Soils in the vicinity of Washington Park are partially old landfill (AMEC 2009). Soils along the roadways are general fill placed during road construction.

Minor Improvements

Soils along the roadways are general fill placed during road construction.

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe:**

Phase 1

Seattle is situated in a moderately active earthquake region where the Juan de Fuca plate is thrust beneath the North American plate along the toe of the continental slope (Galster and Laprade, August 1991). The Uniform Building Code places the Puget Sound area within Seismic Zone 3, which indicates significant seismic risk. The design level earthquake for this zone is magnitude 7.0 to 7.5 with peak ground acceleration of about 0.3g.

The City of Seattle *Environmentally Critical Areas Maps* identify the project site as being within a Liquefaction Area. There are no indications of unstable soils at the project site.

Phase 2

*Alternative A*

Same as Phase 1.

*Alternative B*

Portions of 27th Avenue East, between East John Street and East Arthur Place, are located in an Environmentally Critical Area Potential Slide Zone. Portions of East Madison Street and 29<sup>th</sup> Avenue East, north of East Arthur Place, and Washington Park are in a designated liquefaction zone (environmentally sensitive but not environmentally critical). Parts of Washington Park are former landfill and contain unknown materials; some areas bordering the southern end of Washington Park are >40% steep slopes.

Minor Improvements

Same as Phase 1.

- e. **Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.**

#### Phase 1

Expansion of the existing above-ground storage facility (grassy area) would include excavating approximately 6,000 cubic yards from the area of the existing above-ground storage site and from the two adjacent lots to the south. The site would be excavated to a depth of approximately 12 feet.

#### Phase 2

##### *Alternative A*

This alternative would include removing 17 residential structures and some grading to smooth out existing contours and to fill holes left by basements. Overall soil depth would not be substantially altered and cut/fill would be balanced onsite. A total of less than 5,000 cubic yards of material will be moved around the site.

##### *Alternative B*

This alternative would include filling and grading to accommodate both below-ground and above-ground storage in Washington Park. The park site is an old landfill. Material would be excavated for the below-ground storage and connection to an existing combined sewer (CS) pipe, which is approximately 25 feet below the surface in the park. The amount of below-ground excavation varies from roughly 5,000 to 15,000 cubic yards depending on how much storage is constructed below-ground versus above-ground. Above-ground storage would require approximately 1,500 cubic yards of filling for a retention berm. This alternative also would include a new stormwater pipeline in existing streets (the expected route includes 27th Avenue East, East Arthur Place, East Madison Street and 29th Avenue East and may include 28<sup>th</sup> Avenue East, East Roy Street, and Martin Luther King Jr. Way East). The pipeline would require excavation from 5 to 25 feet deep and from 8 to 10 feet wide, for a total excavated and filled volume of approximately 10,000-20,000 cubic yards, depending on the construction method used (trenchless or open cut) and, if open cut, the depth of excavation.

##### Minor Improvements

This alternative also would include new stormwater pipelines, sewer laterals, landscaping berms and catch basins in existing streets and right-of-ways. The pipelines would require excavation from 5 to 25 feet deep and from 8 to 10 feet wide. The total excavated and filled volume for the minor improvements would be approximately 5,000 cubic yards or less.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe:**

Phase 1

Erosion potential would be minor during construction and after project completion because of the relatively flat topography in the project area. Proposed revegetation of the site also would reduce the likelihood of post-project erosion.

Phase 2

*Alternative A*

Similar to Phase 1, with larger areas of temporarily exposed soil and long-term revegetation.

*Alternative B*

Similar to Phase 1, with more extensive areas of temporarily exposed soil and long-term revegetation. However, only portions of the alignment would be exposed at any one time. Erosion potential would be reduced if trenchless construction methods were used.

Minor Improvements

Same as Phase 1.

**g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

Phase 1

Under Phase 1, the site would remain with almost no impervious surfaces.

Phase 2

*Alternative A*

This alternative would reduce the amount of impervious surfaces from the present condition, which is characterized by 17 single-family residential lots with houses, accessory structures, and pavement. This alternative would result in a vegetated site with almost no impervious surface once the above-ground stormwater storage is constructed.

*Alternative B*

This alternative would not change the amount of impervious surfaces. Paved surfaces would be repaved once excavation is completed and vegetated and/or landscaped areas would be replanted to match existing conditions.

Minor Improvements

This project element would not change the amount of impervious surfaces. Paved surfaces would be repaved once excavation is completed and vegetated and/or landscaped areas would be replanted to match existing conditions.

**h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.**

#### Phase 1

Temporary erosion and sedimentation control measures consistent with City of Seattle standards would be required during construction. Erosion control best management practices (BMPs) would be used throughout construction activities at the site in order to control potential releases of fugitive dust and sediment. All construction activities would comply with temporary erosion control requirements and incorporate BMPs consistent with the City of Seattle's Stormwater, Grading, and Drainage Control Code and associated Director's Rules (SMC 22.800-22.808; DPD Director's Rule 16, 17, 26 and 27-2000). Earthwork would be in compliance with all applicable regulations, including Environmentally Critical Area regulations (SMC 25.09)

The completed above-ground stormwater storage facility would be re-vegetated with grasses to prevent erosion.

#### Phase 2

##### *Alternative A*

Although the area affected would be more extensive, the measures employed would be similar to Phase 1.

##### *Alternative B*

Although the area affected would be more extensive and variable, the measures employed would be similar to Phase 1.

#### Minor Improvements

The measures employed would be similar to Phase 1.

## **B2. Air**

- a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.**

### Phase 1

Emissions during construction would be limited to gas and/or diesel powered construction equipment such as bulldozers, track hoes and delivery vehicles. Some dust is anticipated in the immediate project vicinity due to construction activity. These impacts are expected to be minor, and localized to the construction site and immediate vicinity. Dust and vehicle exhaust emitted during work would be subject to the requirements of the Puget Sound Clean Air Agency that call for the use of reasonable measures to control any emissions to prevent impacts at off-site locations. For example, use of properly tuned equipment would minimize undue exhaust emissions. The completed project would not produce any emissions, except for minor exhaust emission due to occasional maintenance vehicles.

### Phase 2

#### *Alternative A*

Asbestos could be encountered in some of the older homes that would be deconstructed and/or demolished. If asbestos is disturbed without taking proper precautions, it could be inhaled in the vicinity of the project.

Most buildings constructed before 1960, and some built as late as 1978, contain paint with relatively high amounts of lead. "Leaded paint" could contaminate surrounding soil and house dust, and could be inhaled if the soil or dust becomes airborne.

Exhaust emissions during construction and post-demolition would be limited to gas or diesel powered construction equipment such as bulldozers, track hoes and delivery vehicles. Some dust is anticipated in the immediate project vicinity due to earthwork. Such impacts are expected to be minor and localized to the construction site and immediate vicinity.

The completed alternative would not produce emissions, except for minor exhaust emissions due to occasional maintenance vehicles.

#### *Alternative B*

Although the work required would be more extensive and variable, the construction emissions would be similar to Phase 1. The completed alternative would not produce emissions, except for minor exhaust emissions due to occasional maintenance vehicles.

A greenhouse gas (GHG) emissions worksheet (Attachment 2) was prepared for this Addendum, comparing the emissions of the alternative NW Diversion routes:

- Baseline Alignment 2B (open cut methods) = 1,945 MTCO<sub>2</sub>e
- Alternative 2B-1 (trenchless methods) = 996 MTCO<sub>2</sub>e
- Alternative 2B-2 (open cut methods) = 1,896 MTCO<sub>2</sub>e

### Minor Improvements

The construction emissions would be similar to Phase 1. The completed alternative would not produce emissions, except for minor exhaust emissions due to occasional maintenance vehicles.

#### **b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.**

There are no known off-site sources of emissions or odor that would affect this proposal. This is true for all of the sites within the project regardless of phase or alternative.



**c. Proposed measures to reduce or control emissions or other impacts to air, if any:**

Phase 1

During construction, impacts to air quality would be reduced and controlled through implementation of standard federal, state and local emission control criteria and Seattle construction practices. These could include the following: spraying areas of exposed soil with water for dust control, regular street cleaning and reducing exhaust emissions by minimizing vehicle and equipment idling.

Phase 2

*Alternative A*

Demolition of the 17 houses in the 200 Block would not begin until an EPA-certified Asbestos Hazardous Emergency Response Act (AHERA) building inspector conducts an asbestos survey. An Asbestos/Demolition Notification and filing fee must be submitted to the Puget Sound Clean Air Agency whether or not any asbestos is identified, and prior to any demolition or removal of friable asbestos. A notice also would be sent to the state Department of Labor and Industries. All friable and non-friable asbestos-containing materials would be dealt with and disposed of according to the regulations set forth by the Puget Sound Clean Air Agency.

Most buildings constructed before 1960, and some built as late as 1978, contain paint with relatively high amounts of lead. "Leaded paint" could contaminate surrounding soil and house dust, and could be inhaled if the soil or dust becomes airborne. Lead is regulated by the Department of Ecology Hazardous Waste and Toxics Reduction Program.

All deconstruction and/or demolition would follow City of Seattle regulations and permits. Asbestos and lead abatement would take place if these hazardous substances are determined to be present. The contractor also would be required to meet Washington State Department of Labor and Industries and Washington Industrial Safety and Health Act (WISHA) standards for workers who would come into contact with hazardous materials. Air monitoring equipment would be utilized to assess the levels of these substances in the air during work.

Dust and vehicle exhaust emitted during work would be subject to the requirements of the Puget Sound Clean Air Agency that call for the use of reasonable measures to control any emissions to prevent impacts at off-site locations. For example, use of properly tuned equipment would minimize undue exhaust emissions.

During demolition and construction, impacts to air quality would be reduced and controlled through implementation of standard federal, state and local emission control criteria and Seattle construction practices. These could include the following: spraying areas of exposed soil with water for dust control, regular street cleaning and reducing exhaust emissions by minimizing vehicle and equipment idling.

*Alternative B*

Same as Phase 1.

Minor Improvements

Same as Phase 1.

### B3. Water

#### a. Surface:

- (1) **Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If so, describe type and provide names. If appropriate, state what stream or river or water body it flows into.**

No natural surface water bodies exist in the vicinity of the project. However, the City's GIS system notes a "historic stream" that formerly flowed in a northerly direction between the intersection of what is now Martin Luther King Jr. Way and East John Street and the intersection of 29<sup>th</sup> Avenue East and East Thomas Street. This is about one to two blocks east of the project area. This is true for all of the sites within the project regardless of phase or alternative, including the two alternative pipeline alignments being considered.

- (2) **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If so, please describe and attach available plans.**

No work is required or proposed within 200 feet of any surface water bodies as described above. This is true for all of the sites within the project regardless of phase or alternative, including the two alternative pipeline alignments being considered.

- (3) **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

No excavation or fill is proposed in wetlands or surface water bodies. This is true for all of the sites within the project regardless of phase or alternative, including the two alternative pipeline alignments being considered.

- (4) **Will the proposal require surface water withdrawals or diversions? If so, give general description, purpose, and approximate quantities if known.**

No surface water withdrawals are proposed. This is true for all of the sites within the project regardless of phase or alternative, including the two alternative pipeline alignments being considered.

- (5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

No, the project does not lie within a current 100-year floodplain. However, the site is in an area that is subject to periodic stormwater flooding. This is true for all of the sites within the project regardless of phase or alternative, including the two alternative pipeline alignments being considered.

- (6) **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

The project would not produce or discharge waste materials to surface waters. This is true for all of the sites within the project regardless of phase or alternative, including the two alternative pipeline alignments being considered.

#### b. Ground:

- (1) Will ground water be withdrawn, or will water be discharged to ground water? If so, give general description, purpose, and approximate quantities if known.**

Ground water would not be withdrawn; water would not be discharged to ground water. This is true for all of the sites within the project regardless of phase or alternative, including the two alternative pipeline alignments being considered.

- (2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, agricultural, etc.). Describe the general size of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

No discharges are proposed at any of the sites within the project regardless of phase or alternative, including the two alternative pipeline alignments being considered.

**c. Water Runoff (including storm water):**

- (1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

### Phase 1

This is a stormwater-control project. The project would expand an existing - aboveground stormwater storage facility (grassy area), which collects and manages conveyance of stormwater in Madison Valley. Stormwater would eventually be conveyed to the West Point Treatment Plant via the city's and the county's combined sewer systems, just as it is now. The project would help manage stormwater and alleviate the sewer backups and stormwater overflows that have occurred in the past.

### Phase 2

#### *Alternative A*

This alternative is similar to Phase 1. It is an above-ground stormwater-control project and would also collect and manage conveyance of the stormwater in Madison Valley. This alternative includes only minor new piping connections. After the project is completed, stormwater would continue to be conveyed via the same conduits and routes, which flow into the city's and county's combined sewer system eventually arriving at the West Point Treatment Plant.

#### *Alternative B*

This alternative would convey stormwater from a portion of the Madison Valley Basin to both below- and above-ground stormwater storage facilities in Washington Park. The stormwater would be conveyed through new 48-inch and 60-inch pipes, which are expected to be installed in the route including 27th Avenue East, East Arthur Place, 29<sup>th</sup> Avenue East, and East Madison Street and may include 28<sup>th</sup> Avenue East, East Roy Street, and Martin Luther King Jr. Way East. Here the stormwater would be temporarily held until the storm event subsides and the stored water can be released to the city's and the county's combined sewer systems, eventually arriving at the West Point Treatment Plant.

### Minor Improvements

This project element would include new catch basins and piping connections from and to existing systems. After this project element is completed, stormwater, domestic sewer and combined sewer would continue to be conveyed via the same conduits and along similar routes which flow into the city's and the county's combined sewer systems eventually arriving at the West Point Treatment Plant.

- (2) **Could waste materials enter ground or surface waters? If so, generally describe.**

Phase 1

Typical residential area waste materials that get washed into drainage systems, such as soap from car washing, motor oil leaks, exhaust residue, etc., would not be increased or decreased by this project.

Phase 2

*Alternative A*

Region-wide there is no net change in the amount of residential waste material that would enter ground or surface waters (assuming those families that are relocated stay within the region). However on a local scale, the demolition of 17 residences would decrease the likelihood that residential waste material could enter ground or surface waters.

*Alternative B*

Same as Phase 1.

Minor Improvements:

Same as Phase 1.

**d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:**

This is a stormwater control project that would improve the management of peak stormwater events in Madison Valley and greatly reduce the likelihood of system-related stormwater flooding in the area.

No negative impacts to ground or surface waters would result from this project; therefore, no mitigation measures are proposed for surface or ground water. This is true for all of the sites within the project regardless of phase or alternative, including the two alternative pipeline alignments being considered.

**B4. Plants**

**a. Check types of vegetation found on the site:**

<input checked="" type="checkbox"/> Deciduous trees (check types): <input type="checkbox"/> alder <input type="checkbox"/> maple <input checked="" type="checkbox"/> aspen <input type="checkbox"/> other: fruit trees
<input checked="" type="checkbox"/> Evergreen trees (check types): <input type="checkbox"/> fir <input checked="" type="checkbox"/> cedar <input checked="" type="checkbox"/> pine <input type="checkbox"/> other:
<input checked="" type="checkbox"/> Shrubs;
<input checked="" type="checkbox"/> Grass
<input type="checkbox"/> Pasture
<input type="checkbox"/> Crop or grain
<input type="checkbox"/> Wet soil plants (check types): <input type="checkbox"/> cattail <input type="checkbox"/> buttercup <input type="checkbox"/> bulrush <input type="checkbox"/> skunk cabbage <input type="checkbox"/> Other:
(NOTE: wet soil plants are located in ditches).
<input type="checkbox"/> Water plants (check types): <input type="checkbox"/> water lily <input type="checkbox"/> eelgrass <input type="checkbox"/> milfoil <input type="checkbox"/> Other:
<input type="checkbox"/> Other types of vegetation: ivy, blackberry; landscaping and ornamental plants

**b. What kind and amount of vegetation will be removed or altered?**

#### Phase 1

All existing vegetation would be removed on the lots where the stormwater facility is to be expanded. Efforts would be made to salvage and relocate some of the ornamental plants that exist at the site of the expanded stormwater storage facility site. The existing vegetation consists of landscaping and ornamental shrubs such as laurels, rosebushes, azaleas, and small fruit trees. Other vegetation includes ivy and blackberry bushes. A 24-inch-diameter pine tree located in the southeast portion of 106 30th Avenue East lot would be removed. Efforts would be made to retain the plum trees that border the south end of 106 30th Avenue East, if feasible.

#### Phase 2

##### *Alternative A*

Due to the natural depression-like topography of the project site, grading would be minimal; this would allow for the preservation of the existing trees that appear healthy and viable. To the extent feasible, SPU intends to preserve most of the existing vegetation on the lots where the above-ground stormwater storage facility would be constructed.

##### *Alternative B*

Under this alternative, most of the work would be conducted within the existing road right-of-way. Grass berms may be built in Washington Park if above-ground storage is included. Grass would be removed and replaced and the surface would be regraded and bermed, as needed, to construct stormwater storage areas.

#### Minor Improvements

Under this project element, most of the work would be conducted within the existing road right-of-way. Grass berms may be built in the landscaping strip on the NE corner of 29<sup>th</sup> Avenue East and East Denny Way. Grass would be removed and replaced as needed to construct berms.

**c. List threatened or endangered species known to be on or near the site.**

No threatened, endangered or sensitive plant species are known to exist in or around the site (within Township 25 North, Range 04 East, Section 28). The Washington State Department of Natural Resources Natural Heritage Program (NHP) website and maps do not indicate any Natural Heritage Features at this site. This is true for all of the sites within the project regardless of phase or alternative. The website and maps were checked on March 20, 2008.

**d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**

#### Phase 1

The side slopes and bottom of the existing and expanded stormwater storage facility would be re-vegetated with grasses that would survive in the local climate and site conditions. Efforts would be made to salvage and relocate existing ornamental shrubs and trees at the expanded stormwater storage site.

#### Phase 2

##### *Alternative A*

Same as Phase 1.

##### *Alternative B*

Under this alternative, most of the work would occur within existing road rights-of-way. Any areas disturbed by construction, such as the area of the proposed underground flow control vault and above-ground storage area, would be re-vegetated with grass to minimize visual changes to the Park.

#### Minor Improvements

Under this project element, most of the work would occur within existing road rights-of-way. Any areas disturbed by construction would be re-vegetated with grass and street trees to match existing conditions.

### **B8. Land and Shoreline Use**

#### **a. What is the current use of the site and adjacent properties?**

##### Phase 1

The site is currently cleared and the north portion of the site is used for the existing above-ground stormwater storage facility. Existing structures were recently approved for removal on the two lots south of the existing storage facility. These two adjacent lots are vacant. Adjacent properties on the 100 Block to the east are occupied by single-family residences. East Denny Way is to the south and 30th Avenue East is to the west, both with single-family residences across the streets.

##### Phase 2

##### *Alternative A*

The site of this alternative includes 17 single-family residences. The western half of the 100 Block along 30th Avenue East (to the south) is the existing above-ground stormwater storage facility and the eastern half along 31st Avenue East is occupied by single-family residences. The adjacent property to the north, across East Thomas Street, is occupied by a private school.

##### *Alternative B*

This alternative is located within street rights-of-way and park/open space. Adjacent uses along 27th Avenue East and East Roy Street are residential properties; Neighborhood Commercial properties lie along East Arthur Place, East Madison Street, 28<sup>th</sup> Avenue East, 29<sup>th</sup> Avenue East, and Martin Luther King Jr. Way East and public recreational uses are located at Washington Park.

#### Minor Improvements

Minor improvements would be located within street rights-of-ways. Adjacent uses are residential properties; Neighborhood Commercial properties lie along portions of Martin Luther King Jr. Way; and a private school is located on the North side of East Thomas Street.

**b. Has the site been used for agriculture? If so, describe.**

There is no recent history of agricultural use at any of the sites within the proposed project regardless of phase or alternative.

**c. Describe any structures on the site.**

Phase 1

Two houses were recently approved for removal in the area where the above-ground stormwater storage facility would be expanded. No structures would be removed as part of this project.

Phase 2

*Alternative A*

There are 17 single-family residences in the 200 Block of 30th Avenue East and 31st Avenue East. Some of the homes have garages and/or sheds in the yards.

*Alternative B*

There are utilities within the streets in which the conveyance pipeline would be installed. The area of Washington Park that would be included in this alternative is open space and ball fields.

Minor Improvements

There are utilities within the streets in which the conveyance pipelines and catch basins would be installed.

**d. Will any structures be demolished? If so, what?**

Phase 1

No structures would be demolished as part of this project. However, houses and accessory structures were recently approved for removal from this site and are in the process of being removed.

Phase 2

*Alternative A*

The 17 houses and any associated accessory structures (such as sheds, garages, fencing, lighting and utilities) located in the 200 Block would need to be removed from the site, whether by relocation (if feasible), deconstruction (if feasible) or demolition (with 90-98% of materials potentially recycled).

*Alternative B*

No structures would be demolished as part of this alternative.

Minor Improvements

No structures would be demolished as part of this alternative.

**e. What is the current zoning classification of the site?**



Phase 1

The site is zoned Single-Family 5000 (SF 5000).

Phase 2

*Alternative A*

The site is zoned Single-Family 5000 (SF 5000).

*Alternative B*

This alternative is characterized by multiple zoning designations along the expected diversion route that accommodate uses that include street rights-of-way, single- and multi-family residences, commercial activities, and park/open space. Specific zoning designations include: SF 5000, L2 (Residential Multi-Family Lowrise 2), and NC2-40 (Neighborhood Commercial).

Minor Improvements

There are multiple zoning designations along the various street rights-of-way, single- and multi-family residences, commercial activities, and private school. Specific zoning designations include: SF 5000, L2 (Residential Multi-Family Low rise 2), and NC2-40 (Neighborhood Commercial).

**f. What is the current comprehensive plan designation of the site?**

Phase 1

Single-Family residential

Phase 2

*Alternative A*

Same as Phase 1.

*Alternative B*

Multi-Family Residential, Commercial/Mixed use, and City-Owned Open Space.

Minor Improvements

Single-Family residential, Multi-Family Residential, and Commercial/Mixed use.

**g. If applicable, what is the current shoreline master program designation of the site?**

None of the sites for the proposed project are within an area subject to the City's shoreline master program.

**h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.**

Phase 1

City of Seattle Critical Area Maps indicate that the site is within a “liquefaction area” designation. Liquefaction zones are considered environmentally sensitive, but not environmentally critical.

Phase 2

*Alternative A*

Same as Phase 1.

*Alternative B*

Portions of 27th Avenue East, between East John Street and East Arthur Place, are located in an Environmentally Critical Area Potential Slide Zone. Portions of East Madison Street (between 29<sup>th</sup> Avenue East and Lake Washington Boulevard East) and 29<sup>th</sup> Avenue East (between East Madison Street and East Roy Street) are in a designated liquefaction zone (environmentally sensitive but not environmentally critical). Parts of Washington Park are former landfill and contain unknown materials; some areas are >40% slopes. Washington Park is designated as an Environmentally Critical Area Wildlife Zone.

Minor Improvements

Same as Phase 1.

**i. Approximately how many people would reside or work in the completed project?**

No persons would reside or work in the completed project under any part of the project regardless of phase or alternative.

**j. Approximately how many people would the completed project displace?**

Phase 1

No people would be displaced because of this project in Phase 1.

Phase 2

*Alternative A*

The residents of 17 houses in the 200 Block would be displaced. The homes would be bought at fair market value without consideration of the flooding history of the location and moving expenses would be paid. Relocation of any tenants would follow City of Seattle relocation requirements. If feasible, houses may be relocated elsewhere. There has been no official count of the number of people living in these 17 residential homes.

*Alternative B*

Same as Phase 1.

Minor Improvements

Same as Phase 1.

**k. Proposed measures to avoid or reduce displacement impacts, if any:**

Phase 1

No measures necessary or proposed to reduce displacement impacts.

Phase 2

*Alternative A*

The residents of the houses that would be demolished would have their moving and real estate expenses paid. The City is offering fair market value for these lots without considering the flooding history of the location. Relocation of any tenants would follow City of Seattle relocation requirements.

*Alternative B*

Same as Phase 1.

Minor Improvements

Same as Phase 1.

**l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

*Seattle's Comprehensive Plan: Toward a Sustainable Seattle (2004-2024)*

Although neighborhood planning documents are advisory, the Seattle's Comprehensive Plan goals and policies are official City policy. This land use planning document was originally published in 1994 and has been updated on many occasions, most recently in 2007. The updates included specific land use goals and policies for specific objectives for the City's neighborhood planning areas.

The proposed project is consistent with goals set forth in the Plan. The project would help address flooding problems in Madison Valley thereby supporting projected land uses and plans for the community under any part of the project regardless of phase or alternative.

The Madison Valley neighborhood was reviewed under the Central Area Neighborhood Plan. The proposed project is consistent with the goals set forth in the Plan in Chapter 9, Section 6, Drainage.

**B12. Recreation**

**a. What designated and informal recreational opportunities are in the immediate vicinity?**

### Phase 1

The closest designated recreational opportunity is William Grose Park, an 18,700-square foot mini-park, located at 30th Avenue East between East Denny Way and East Howell Street. It includes benches, a picnic table, and passive recreation opportunities within open green space. Neighborhood sidewalks provide an opportunity for casual walkers.

Harrison Ridge Greenbelt is located on 32nd Avenue East between East Denny Way and East Harrison Street. Another greenbelt is located in the vicinity of 3001 East Madison Street, 30th Avenue East and East Mercer Street and is used as a Pea Patch.

Washington Park is approximately 0.3 miles from the existing 1.0 million gallon above-ground stormwater storage facility and the Arboretum borders Washington Park on the north.

Within the immediate vicinity, the existing above-ground stormwater storage facility provides an informal open space area for recreation when not saturated. The expansion of the existing above-ground stormwater storage facility south to East Denny Way would increase the area available for such passive recreation.

### Phase 2

#### *Alternative A*

This alternative has the same recreational opportunities as Phase 1, although the proposed site would occupy the entire block directly north of the existing stormwater facility. The conversion of the area within the 200 block of 30<sup>th</sup> Avenue East, between East Thomas Street to East John to a stormwater storage area (grassy area) would increase the amount of land available for recreation by approximately three times, since water would only appear in it during very large storms.

#### *Alternative B*

The closest designated recreational opportunity is William Grose Park; an 18,700-foot mini-park, located at 30th Avenue East between East Denny Way and East Howell Street. It includes benches, a picnic table, and passive recreation opportunities within open green space. Neighborhood sidewalks provide an opportunity for walkers and joggers. Harrison Ridge Greenbelt is located on 32nd Avenue East between East Denny Way and East Harrison Street. Another greenbelt is located in the vicinity of 3001 East Madison Street, 30th Avenue East and East Mercer Street and is used as a Pea Patch.

Prentis Frazier Park is 0.3 acres and lies between 23rd Avenue East and 24th Avenue East, north of East Harrison Street. This park is approximately 0.2 miles west of the closest section of the proposed conveyance pipe alignment.

Washington Park is incorporated into the design of the proposed above-ground stormwater storage facility. Part of the open space south of the existing soccer/ballfields may be flooded during 100-year or larger storms when stormwater is diverted into the park if the design incorporates above-ground storage for especially high stormwater flows.

### Minor Improvements

Similar to Phase 1.

## **b. Would the proposed project displace any existing recreational uses? If so, describe.**

### Phase 1

The project would not displace any existing recreational uses in the long-term. Sidewalks may be temporarily closed during construction. Upon completion of the project, a walkway is proposed to encircle the entire above-ground stormwater storage facility. The existing sidewalk on the south side of the stormwater facility would be removed and new walkways would be installed to connect to the existing sidewalks around the expanded stormwater storage facility.

#### Phase 2

##### *Alternative A*

The project would not displace any existing recreational uses in the long-term. Sidewalks may be temporarily closed during construction. Upon completion of the project, a walkway would encircle the proposed stormwater facility.

##### *Alternative B*

The project would not displace any existing recreational uses in the long-term. Sidewalks may be temporarily closed during construction. Flooding events might temporarily displace uses in the immediate vicinity of Washington Park, but those events are extremely rare and typically last only for a few hours.

#### Minor Improvements

This project element would not displace any existing recreational uses in the long-term. Sidewalks may be temporarily closed during construction.

**c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

The project would not impact existing recreational opportunities in the long-term and no measures are warranted or required under any part of the project regardless of phase or alternative.

#### Phase 1

The completed above-ground stormwater storage facility would be re-vegetated with grasses to serve as a simple, passive park/open space area, except during large storm events.

#### Phase 2

##### *Alternative A*

This alternative has the same recreational opportunities as Phase 1, although the proposed site would occupy the entire block directly north of the existing stormwater storage facility. The conversion of the area within the 200 block of 30<sup>th</sup> Avenue East, between East Thomas Street to East John to a stormwater storage area (grassy area) would increase the amount of land available for recreation by approximately three times.

Washington Park is a City of Seattle-designated Environmentally Critical Area for Wildlife. The above- and under-ground stormwater storage facility would be located at the very southern end of Washington Park. No trees would be removed. However, construction of an under-ground stormwater storage facility would require excavation. The site would be re-seeded with grass, and would be virtually the same after construction except for a grassy berm, which would serve as the boundary for the above-ground portion of the stormwater storage facility.

##### *Alternative B*

Required signage during construction would inform sidewalk users of temporary disruptions and detours.

Minor Improvements  
Same as Alternative 2B.

### **B13. Historic and Cultural Preservation**

**a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.**

All of the locations were checked against the following registers on March 5, 2008:

- City of Seattle Landmarks
- Washington Heritage Register
- National Register of Historic Places (NRHP)

No listed or known eligible historic resources are present on any of the project sites.

**b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.**

Marie Ruby, SPU's cultural resources advisor, was consulted and provided the following information on March 10, 2008 as it pertains to all of the project site locations:

The Burke and ethnographic databases show the following area of cultural resource interest:

- A groundstone tool was found 0.3 miles from the project areas.
- A burial is located on the shore of Lake Washington 0.6 mile from the project areas.
- Lake Washington was a native-named geographic feature.

A Cultural Resources Assessment (Draft Cultural Resources Technical Memo: April 28, 2009) was prepared for the project by AMEC Earth & Environmental. AMEC staff conducted a record search and literature review that identified five archaeological sites located within one mile of the project. These include four World War II fighter planes that are submerged in Lake Washington and the Miller Street Dump, which is located at the north end of the Arboretum. The Miller Street Dump is an historic landfill that was deposited between 1910 and 1936.

Previous studies cited by AMEC consider Washington Park Arboretum (developed by the Olmstead brothers and served as the main entry to the Alaska Yukon Pacific Exposition) a cultural landscape that is likely eligible for Seattle's landmark status. A nomination package has been submitted for the entire Park to the Department of Neighborhoods; however, no elements within the project area are designated as landmarks.

AMEC identified two areas of potential concern for archaeological resources: the Madison Street Landfill (45KI489) (at Washington Park) and the East Madison Street cable car route. A cable car once operated on East Madison Street, connecting the ferry terminal and downtown Seattle to Lake Washington and the eastside. Although the cable route is not a documented archaeological site, it is possible that remnants of the route, original tracks, and associated refuse may be encountered during excavation along the street.

**c. Proposed measures to reduce or control impacts, if any:**

Compared with the baseline alignment, Alternative 2B, the alternative alignments (Alternative 2B-1 and Alternative 2B-2) both would reduce the amount of excavation along East Madison Street. Alternative 2B-1 (with trenchless construction methods) also would reduce the potential for disturbing near surface archaeological deposits, both along East Madison Street and elsewhere along the pipeline alignment.

Due to the indications that native people were in the general area, all city or contracted workers would be advised to be aware of what cultural resources might be encountered, and must be familiar with the following protocol for discovery of resources during construction. Should either historic or prehistoric cultural material be encountered during the project activity, work in that immediate area would be suspended, and the find would be examined and documented by a professional archaeologist. Decisions regarding appropriate mitigation and further action would be made at that time.

**B14. Transportation**

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.**

#### Phase 1

The site is well served by public streets and arterials. East Madison Street runs east-west 3 blocks north of the project site. Martin Luther King Jr. Way runs north-south two blocks west of the project site. Local streets directly affected by the project include East John Street and East Thomas Street and 30th Avenue East.

#### Phase 2

##### *Alternative A*

The site is well served by public streets and arterials. East Madison Street runs east-west 3 blocks north of the project site. Martin Luther King Jr. Way runs north-south 2 blocks west of the project site. Local streets directly affected by the project include East John Street, East Thomas Street, 30th Avenue East, and 31st Avenue East.

##### *Alternative B*

#### East Madison Street

This alternative may impact traffic along an approximate one-block stretch of East Madison Street (a major arterial) adjacent to Washington Park. East Madison Street traffic impacts would be limited to half-street closures which would maintain open travel via one lane in each direction at all times. Duration of impact on East Madison Street is expected to be approximately three to four weeks. The primary impact would be temporary loss of parking and traffic distractions in the immediate vicinity of the construction activity. Alternative trenchless methods would be considered during design which could reduce traffic and parking impacts.

#### All Other Areas

The rest of the project would require road right-of-way work on less traveled residential-access streets causing little or no impact to local commuters. These residential streets include street parking. Closing these streets would most affect those who use the parking; however, street parking and detour streets are available nearby. Local access to adjacent homes and businesses would be maintained during construction activities.

#### Minor Improvements

The impacted sites are well served by public streets and arterials. Martin Luther King Jr. Way runs north-south; traffic impacts related to construction of new catch basins along this street would be limited to half-street closures which would be set up to maintain open travel via one lane in each direction at all times.

Local streets directly affected by the pipelines and landscape berm work would include E. Harrison Street, East Thomas Street, East Denny Way, 29th Avenue East, 30th Avenue East, and 31st Avenue East. Temporary closures and detours around these less traveled residential-access streets would cause little or no impact to local commuters. These residential streets include street parking. Closing these streets would most affect those who use the parking; however, street parking and detour streets are available nearby. Local access to adjacent homes and businesses would be maintained during construction activities.

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?**



#### Phase 1

Metro transit provides transit service (Route 8) on Martin Luther King Jr. Way about two blocks west of the project site. Metro transit provides multiple bus routes (11, 84 and 988) on East Madison Street located about four blocks north of the project site. The use of these bus routes would not be affected by this project.

#### Phase 2

##### *Alternative A*

Metro transit provides transit service (Route 8) on Martin Luther King Jr. Way about two blocks west of the project site. Metro transit provides multiple bus routes (11, 84 and 988) on East Madison Street located about four blocks north of the project site. The use of these bus routes would not be affected by this project.

##### *Alternative B*

Metro transit provides transit service (Route 8) on Martin Luther King Jr. Way and multiple bus routes (11, 84, and 988) on the stretch of East Madison Street that is adjacent to Washington Park. The use of these bus routes would not be affected by this project, though it could potentially cause slight bus schedule delays. Two-way travel would be maintained at all times on East Madison Street. Martin Luther King Jr. Way is a two-way street; installation of the conveyance pipeline across this street would be limited to one side of the street at a time, leaving the other side of the street for travel. Construction traffic control workers would be on-site to manage two-way traffic. Alternative trenchless methods would be considered during design which could reduce impacts at this street crossing.

#### Minor Improvements

Metro transit provides transit service (Route 8) on Martin Luther King Jr. Way about two blocks west of the project site. Metro transit provides multiple bus routes (11, 84 and 988) on East Madison Street located about four blocks north of the project site. The use of these bus routes would not be affected by this project.

Metro transit provides transit service (Route 8) on Martin Luther King Jr. Way. Martin Luther King Jr. Way is a two-way street. Installation of the new catch basins and connecting pipelines across this street would be limited to one side of the street at a time, leaving the other side of the street for travel. Construction traffic control workers would be on-site to manage two-way traffic.

- c. How many parking spaces would the completed project have? How many would the project eliminate?**

Phase 1

The completed project would neither create nor eliminate any public parking from the present conditions. Construction parking would be short-term and would be accommodated on surrounding streets.

Phase 2

*Alternative A*

Same as Phase 1, except that this alternative would reduce the demand for on-street residential parking. Due to the larger site, some of the construction parking also would be accommodated on site.

*Alternative B*

Same as Phase 1, except that this alternative would temporarily reduce parking availability on streets immediately adjacent to the current construction activities along the pipeline route.

Minor Improvements

Same as Phase 1, except that this project element would temporarily reduce parking availability on streets immediately adjacent to the current construction activities.

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).**

Phase 1

This proposal would not create any new roads or streets.

Phase 2

*Alternative A*

Same as Phase 1.

*Alternative B*

This proposal would not create any new roads or streets; however, it does require excavation and filling within the road rights-of-way along 27th Ave East, East Arthur Place, 29th Avenue East, and Madison Ave East and may include 28<sup>th</sup> Avenue East, East Roy Street, and Martin Luther King Jr. Way East. These streets would likely be replaced in the vicinity of the pipeline work as part of this construction.

Minor Improvements

This proposed project element would not create any new roads or streets; however, it would require excavation and filling within existing road rights-of-way. These streets would likely be replaced in the vicinity of the catch basin and pipeline installation work as part of this construction.

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

The project is a stormwater facility and does not require the use of transportation upon completion under any part of the project regardless of phase or alternative.

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.**

### Phase 1

The number of vehicular trips and peak volumes are not expected to change as a result of this proposal, since this would be an incremental expansion of the existing above-ground stormwater storage facility. During construction the busiest work days would generate approximately 40 trips from trucks and workers, and the total expected vehicular trips for this project construction phase is approximately 600 trips.

After construction, the project would require periodic maintenance visits by utility workers resulting in a minor increase in the amount of vehicle trips, even during peak volumes.

### Phase 2

#### *Alternative A*

The number of total and peak trips would be reduced, due to the elimination of 17 residences. During construction approximately 40 trips would be generated during the busiest work days due to trucks and workers, and the total number of expected trips over the entire construction project is 400. Most of the construction trips would result from removal of the existing houses. Comparatively few construction truck trips would result from removal of soil, under this alternative.

After construction, maintenance workers would contribute about one or two trips per month.

#### *Alternative B*

During construction it is projected that the busiest work days would generate 80 vehicular trips due to trucks and workers. Depending on the size of below-grade storage there would be approximately 500 to 1,500 total vehicular trips for the work in the park and an additional 1,250 to 3,500 total trips for the pipeline work, depending on the construction method used (trenchless or open cut) and, if open cut, the depth of excavation. During peak commute hours, East Madison Street is a congested roadway. Increased vehicular trips during construction would add to this congestion temporarily. Reducing impacts to traffic and businesses along East Madison Street is among the reasons for evaluating Alternative 2B-1 and Alternative 2B-2.

After construction, maintenance workers would contribute about one or two trips per month.

### Minor Improvements

During construction approximately 40 trips would be generated during peak work days due to trucks and workers, with approximately 600 trips over the entire construction project.

After construction, maintenance workers would contribute about one or two trips per month.

## **g. Proposed measures to reduce or control transportation impacts, if any:**

Phase 1

The contractor would be required to submit a traffic control plan for approval by the City that would be enforced during construction. The traffic control plan would also address both traffic flow and the temporary disruption and relocation of on-street parking in the vicinity of the project.

Phase 2

Alternative A

Same as Phase 1.

Alternative B

Same as Phase 1. Two-way traffic would be maintained at all times on East Madison Street and Martin Luther King Jr. Way.

Minor Improvements

Same as Phase 1. Two-way traffic would be maintained at all times on East Madison Street and Martin Luther King Jr. Way.

**CONCLUSION**

Following the 2008 publication of the SEPA Checklist and the DNS for the Madison Valley Long-Term Stormwater Project, SPU refined the design to consider modifying the conveyance pipeline alignment and using trenchless construction. The evaluation of potential impacts from the alternative pipeline alignments and trenchless construction methods in this Addendum indicate that they would not result in any probable significant adverse impacts. Therefore, the 2008 SEPA determination of non-significance remains unchanged.

SEPA Lead Agency: Seattle Public Utilities

Contact Person:

Grace Manzano, Assistant Project Manager  
Seattle Public Utilities  
Seattle Municipal Tower, Suite 4900  
PO Box 34018  
Seattle, WA 98124-4018  
(206) 233-1534

Responsible Official:

Joy Keniston-Longrie, Director  
Environmental Permitting and Interagency Coordination  
Seattle Public Utilities  
Seattle Municipal Tower, Suite 4900  
PO Box 34018  
Seattle, WA 98124-4018  
(206) 684-5972

Signature: Joy Keniston-Longrie

Date: June 22, 2009

The Addendum may be reviewed at Seattle Public Utilities, Seattle Municipal Tower, 700 5<sup>th</sup> Avenue, Suite 4900, Seattle, Washington.

The Addendum is also available on the Seattle website at [www.seattle.gov/util](http://www.seattle.gov/util). To find the document, type in Madison Valley Long-Term Stormwater SEPA in the search field on the top right side of the page.

In accordance with SMC 25.05.625.F, any person, affected tribe, or agency may submit comments to the Responsible Official within fifteen (15) days of the date of issuance of this addendum.

